GITTINGS F.C.B.

HAS THE NAVY ANY OPHTHALMIC SEQUELAE

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BY

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Until recent years it was practically unknown for a Naval Medical Officer to practice in the Navy as an ophthalmic specialist and then later to settle down in a naval port and again practise ophthalmology. Under these circumstances I thought a few remarks under the title of "Has the Navy any ophthalmic sequelæ" might be of interest. During 1928 and 1929 33 cases of blindness were certified in the County Borough of Portsmouth. The number is small on which to base statistics but some interesting inferences can be drawn from an analysis of these cases. In order not to weary you with long lists of cases and statistics a paper has been distributed with an analysis of these cases together with the statistics of 601 cases of blindness occuring in London and analysed by Mr. Bishop Harman.

There are no cases of blindness attributable to service conditions with the possible exception of the case of trachoma stated to have been contracted at Malta during the war. In the East, as you know, trachoma is an important source of blindness. In invaliding a man from the service for trachoma it is well therefore to take into account the fact that an uncured case may lead to blindness and estimate the man's disability for pension purposes accordingly.

A comparison of the cases occurring in Portsmouth with those of Mr. Bishop Harman which occurred in London give several interesting features. Ophthalmia due to gonorrhœa is not appreciably more prevalent in Portsmouth than in London and there were no cases of purulent conjunctivitis of later years. This happy result is no doubt due to a considerable extent to the energetic action of the Portsmouth Corporation under the able guidance of their Medical Officer of Health, Dr. Mearns Fraser. Syphilitic keratitis is a cause of blindness in nearly 16 per cent. of cases in my series compared with about 4 per cent. in Mr. Bishop Harman's cases. Accepting the statistics many conclusions may be drawn, e.g., syphilitic keratitis is more prevalent in Portsmouth

[1] A Paper read at the Portsmouth Congress.

make the price per day for board and lodging any lower than Frs.7.50 for Swiss subjects and Frs.8.25 for foreigners. The reason for this difference in price is that the Confederation grants to all philanthropic establishments which receive tubercular cases a subsidy fixed every year by the Federal Service of Public Hygiene on the basis of the number of days of Swiss patients, with the addition of a small percentage on the working expenses.

With the present rates for board and lodging we shall have to face a probable annual deficit of Frs.70,000 during the first years. An undertaking of so vast a scope ought, later on, to be self-supporting, without arrears, and with a reserve fund. We are sure to attain our object with international financial help and goodwill as soon as time has proved the economic value of the medical-social demonstration we have begun.

Our patients come to us from various parts; some directly from the exterior, others from our popular clinics. Many will be sent us by anti-tuberculosis leagues, by insurance companies and municipalities, organisations with which we shall be able to come to definite arrangements. The existence of our Factory-Clinic can only serve to lighten their task in giving to the insured tubercular patients the means to escape the peril of inaction—a danger to be feared as much as tuberculosis itself—and to earn all or part of the cost of their maintenance.

In this way the difficult and often sad problem of the cure, and the future of indigent patients suffering from surgical tuberculosis will be solved by the most rational means.

Let us hope that the work of the Factory-Clinic, so full of promise, but very heavy with responsibility for its instigators, will have the good-will of all those who are touched by the fate of these unfortunate invalids.

The way is traced. We do not doubt that it is the right way. And if, later on, the experiment should become general, as I firmly believe it will, a decisive step will have been taken in the domain of the anti-tuberculosis struggle; in the path of social progress also, since, by a fair adjustment of things, indigent tubercular invalids will henceforth be promoted to the ranks of the privileged.

than in London or the modern treatment is not successful in preventing this congenital manifestation or the modern treatment of the condition is not successful. Many ophthalmic surgeons are of opinion that the modern treatment of interstitial keratitis with arsenical compounds intravenously gives better results than mercurial treatment but that is not my experience, however, my experience is not sufficiently large for me to dogmatise. The only other point in this series is the number of cases of retinitis pigmentosa occurring in Portsmouth, viz., 12.12 per cent. This relatively large percentage does not appear to be due to smallness of the number of cases for I have already in the first three months of this year seen two cases in private. Some of the cases are definitely hereditary but others have occurred without any family history. The last case I saw was in a young man and the Wasserman reaction was negative. Possibly it is a habit of growth with a syphilitic ancestry, but doubtless there are objections to this theory. I should like to call attention of members of the Congress to the Portsmouth Voluntary Association for the Welfare of the Blind. It is worth investigating as it is a model for the United Kingdom and possibly for the world. The Workshop for the Blind should be visited and its devoted Superintendent interviewed.

To get a different view in order to answer my question, "Has the Navy any ophthalmic sequelæ". I took the first 100 cases from my file for last year, and the causes of aid being sought were :

Tobacco amblyopia	...	7 per cent.
Cataract	... ...	7 ,, ,,
Myopia (marked)	...	15 ,, ,,
Retinitis pigmentosa	...	2 ,, ,,
Various	... ...	27 ,, ,,
Refraction	... ...	32 ,, ,,

The only interesting feature about this is that tobacco amblyopia causes as much defective vision in Portsmouth as cataract, but it is curable and I have seen no case of blindness from this cause. It may therefore be said that cheap tobacco in a Naval port is a mixed blessing, but it is easy to make fallacious deductions. It is not the man who smokes the most tobacco that gets tobacco amblyopia, in fact most of my cases smoke about 2oz. a week or at least they say they do. Tobacco probably does not affect a man unless he has arterio-sclerosis or some other rarer diseases such as diabetes. The question then arises is arterio-sclerosis more common among a naval

population, but I will leave the answer to this question to some more competent judge, as it is outside the department of an ophthalmic surgeon. When I was investigating muscle balance in the Navy I came across an appreciable number of cases that could not be corrected to 6/6 completely; many of these were probably mild cases of tobacco amblyopia, but the subject awaits further investigation. Sepsis of the teeth is a probable cause of arterio-sclerosis but that is now being eliminated from the Navy.

An ophthalmic surgeon is trained to accept his patients' statements about their eyes and then to seek for the correct interpretation. How then is to be interpreted the statement frequently heard that the eyes have been affected owing to the service? The most frequent complaints made to me are that the eyes have been affected through working with oil fuel, serving at Malta or out East, through watching a flashing lamp, or inability to qualify in flashing lamp tests. First take the statement that the eyes have been affected by the use of oil fuel. Usually the defect found has been presbyopia in a hypermetropic subject and I have always told my patients that oil fuel does not affect the eyes but I have in my private practice come across one case that suggests a definite change. Recently I saw a Chief Stoker, invalided from the Navy, who corrected to 6/6 in right eye and 6/5 in the left. Running across both corneæ slightly above the centre was a band from an old ribbon keratitis. There was a history of being in hospital with a "bad eye". It is difficult to account for this except on the supposition that he had been exposed to some dust or irritating vapour like oil fuel. It would be just as well therefore to examine carefully for some slight superficial keratitis in case of complaint by stokehold ratings.

Next there are the cases of signalmen who complain of ocular discomfort or asthenopia on being exercised with the flashing lamp or sometimes inability to pass flashing lamp tests. These are usually perfectly genuine cases. Small errors of refraction especially when oblique may give rise to such symptoms, but I was never able to convince myself that such was the usual cause in these cases. Recently I saw a young man with imperfect muscle balance in the vertical direction (hyperphoria) who had been labelled as a neurasthenic. Although the defect was of high degree (4°) it was not always present, the symptoms were completely relieved with prisms. I think it not improbable that careful investigation might

reveal small degrees of hyperphoria in these cases of asthenopia on using the flashing lamp.

Next are the cases of those men who declare that their eyesight "went all wrong" in the Navy without giving any specific cause or perhaps saying that it was due to service out East or in Malta. Usually again these are cases of hypermetropia or more often hypermetropic astigmatism, where presbyopia is beginning to cause trouble and their accommodation is becoming insufficient for the daily work. Under this heading I should like to discuss standards of vision and the desirability of first aid lectures on eyesight.

There are many difficulties in the fixing of standards of vision in the Navy and lately it has been investigated in a scientific manner. The ordinary man with 6/12 vision was until recently unaware of any defect unless his attention was called to it by examination or through his inability to see the scores on the board at a cricket match but now the cinema calls attention to defects of even less than 6/12 through inability to read the captions, hence the growth of opticians' shops and the more prevalent wearing of glasses. Under the Blind Person's Act the meaning of blindness is laid down as too blind to perform any work for which eyesight is essential. Taking the other extreme, a rough guide in certification is 6/60 with vision, above this standard men can usually earn their living and I know of one man with less than this amount of vision earning a fairly high wages as a labourer, his only complaint being that he could not read the paper. The following extract from the *Portsmouth Evening News* of December 24th is of interest in this connection. "Territorials Proud Record". The most eagerly sought prize offered to the best marksman was won this year by a first season recruit—by reason of his fine marksmanship he holds for one year the Bellairs Cup. He tried to emigrate to Australia, but was rejected on account of his weak eyesight. His wonderful success in marksmanship should be of peculiar interest to the authorities who held such a poor opinion of his vision". The object of giving these three preceding illustrations is to emphasise the difficulties of fixing standards and a plea that naval standards should not be too divorced from the standards found sufficient in civil life. A myope of even slight degree is barred from most branches of the service, although myopia is usually accompanied by a high degree of mental ability. Many myopes could readily pick up a lighter, a buoy, and with a

telescope read the lettering, in fact they have an acute light sense. The light sense is probably more important in the Navy than the form sense. Several ophthalmologists have referred to the importance of the light difference, but have not proceeded with the question as there is no satisfactory practical test.

Lastly in connection with the complaints made by men that their defective vision is due to the service I would like to advocate first aid lectures in connection with the eye, and lectures are equally necessary in civil life.

First they should be taught that persons with normal sight require glasses at the age of 45 and that for every degree of long sight they will have to start glasses five years earlier. It is a good rule therefore for persons of that age to have the eyes carefully examined by an ophthalmic surgeon as it is an age when the first ophthalmic troubles of old age, etc., can be detected. Without advice from an ophthalmic surgeon no glasses should be worn unless it has been demonstrated that with each eye separately at 20ft. the lowest line of the usual test-type can be clearly seen without glasses or with a correcting glass, not of course necessarily the one ordered for reading.

Secondly redness of the eye, however slight, unless there is also a discharge is a warning that skilled attention is required. This warning should never be neglected.

Thirdly, a squint needs immediate attention or blindness of the affected eye may ensue. No child is too young to wear glasses.

Lastly, except in the above case, don't be frightened by tales that unless glasses are worn blindness will ensue. Glasses have never prevented anyone from losing the sight, or prevented any deterioration of vision, with some possible but doubtful exceptions. Glasses that do not improve the vision or increase the comfort in using the eyes are valueless.

Finally, don't be worried by the fear of blindness; remember the slogan "it may never happen".

Comparison of the Cause of Blindness in Portsmouth and London.

London: Report of Departmental Committee on the Causes and Prevention of Blindness, 1922. An analysis of 601 cases of blindness seen by Mr. Bishop Harman. These were of all ages, i.e., with a preponderance of adults. They were of all classes,

well-to-do, middle class and some artisan, and include a certain number referred for examination by the National Institute for the Blind.

Portsmouth: Certified during 1928 and 1929 under the Blind Persons Act, 1920.

Disease.	London. No.	London. Per cent.	Portsmouth. No.	Portsmouth. Per cent.
Congenital defects	34	5.66	2	6.06
Accidents	20	3.33	2	6.06
Ophthalmia neonatorum	14	2.32	2	6.06
Purulent conjunctivitis of later years	20	3.34		
Syphilitic keratitis	24	3.99	5	15.15
Other corneal diseases	27	4.49		
Cataract	94	15.64	4	12.12
Iritis and iridocyclitis	56	9.32	3	9.09
Macular disease			1	3.03
Detached retina	14	2.33		
Choroiditis	77	12.81		
Optic atrophy	38	6.32	4	12.12
Glaucoma	55	9.15	1	3.03
Malignant disease	2	0.33		
Myopia	84	13.98	3	9.09
Trachoma			1	3.03
Lebers disease			1	3.03
Retinitis pigmentosa			4	12.13
	601	100.0	33	100.0

HEALTH CONDITIONS THROUGHOUT THE WORLD.

Surgeon-General H. S. Cumming in a report recently submitted to United States Congress states that the fiscal year ended June 30th, 1930, was a relatively favourable one. The general death rate was, as a rule, less for that period than for the corresponding period of the preceding year and approaching the unusually low death rate of the year ended June 30th. 1927. Throughout the Northern Hemisphere influenza and pneumonia were at low levels during the year. Of minor importance with regard to the total number of cases, but of great interest because of the nature and severity of the disease, was the epidemic of psittacosis which occurred in the Winter of 1929-30. Between 350 and 400 cases were reported throughout the world, with a case fatality of 35 to 40 per cent. The disease appeared more or less simultaneously on three continents, Europe, South America and North America. In January, 1930, a number of countries had prohibited the importation of parrots, and the epidemic subsided. The cholera situation in most countries where that disease is prevalent has been relatively favourable during the year. A considerable epidemic of cholera occurred in the Spring of 1930 in the central provinces of India, but the situation elsewhere in India was relatively favourable. Cholera was reported in the Philippine Islands in May, 1930.

THE MEDICAL AND HYGIENIC CONDITIONS IN FRANKFURT

BY

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In 1930, the population of Frankfurt a/Main amounted to 547,000; (313,000 Evangelists, 183,000 Catholics, 30,000 Jews and 23,000 Dissidents). In 1929, out of each 1,000 of the population, there were: marriages 10.7 per cent., living births 12.4 per cent., mortality rate 11.4 per cent.; one can see that the birth surplus is 1 per cent. Of these births, 13.8 per cent. were of women out of wedlock, 3.2 per cent. were still born; 71 per cent. of the confinements were in institutions. Of every 100 live born children 6.3 per cent. die in the first year and 3.8 per cent. in the first month of life. The number of deaths during the first year of life totalled 6.8 per cent. A detailed list of the deaths at all ages in every 100 cases may be summarized as follows: heart disease 14.1 per cent., cancer and other malignant tumours 13 per cent., diseases of the respiratory system 11.7 per cent. of which pneumonia totals 8.8 per cent, grippe 1 per cent,, tuberculosis 9.9 per cent., cerebral hæmorrhage 6.3 per cent., old age 3.7 per cent., suicide 3.2 per cent., accidents 2.2 per cent., stomach and intestinal diseases 1.8 per cent., typhoid fever 0.13 per cent., measles 0.34 per cent., scarlet fever 0.02 per cent., diarrhœa 0.55 per cent., diphtheria 0.13 per cent., dysentery 0.1 per cent., puerperal sepsis 0.4 per cent., and miscellaneous causes of death 32.17 per cent.

The supervision of all the health units lies in the hands of the Government (Prussia), and is controlled through three State district physicians (Kreisärzte). The management of the health departments is mostly controlled by the city. The City Health Department is under the supervision of a physician who is a full paid supervisor and member of the court. At the city health bureau, there are official city doctors, among them five women physicians as semi-official social supervisors (Fürsorge) and school physicians.

The physicians at Frankfurt number 943, of which 50 are women physicians, 627 physicians are in active practice, among which 277 are in general practice and 350 in a specialty. The number of dentists in practice are 150 and druggists 58.

Contagious Diseases in 1929 were reported as follows: Diphtheria, 385 cases, 9 deaths; Epidemic Cerebro-Spinal Meningitis, 4 cases, 3 deaths; Tetanus, 14 cases, 7 deaths; Puerperal Fever, in full time births, 2 cases, 2 deaths; Sepsis following abortion, 6 cases, 4 deaths; Spinal paralysis in children, 8 cases, no deaths; Trachoma, 5 cases; Food poisoning, 11 cases; Paratyphoid fever, 102 cases, 1 death; Dysentery, 155 cases, 2 deaths· Scarlet fever, 1,095 cases, 5 deaths; Typhoid fever, 34 cases, 4 deaths; Lung and laryngeal tuberculosis, 680 cases and 278 deaths. Three social supervisors (female) paid by the city see that the police regulations are carried out, especially isolation and disinfection during convalescence.

The tuberculosis mortality rate of 10,000 inhabitants was 8.37 per cent. The hospital for the care of Pulmonary diseases in Frankfurt, aided by the Frankfurter Society of Tuberculosis Aid, formed the centre of the fight against tuberculosis. In 1929, 11,022 cases were treated, among them 1,867 cases of active tuberculosis.

All disinfection was carried out throughout 1928 by the newly built Disinfection Institution. It served both the need of the hospital and the people. It carried out the disinfection of homes, furniture, clothes, as well as the destruction of vermin.